

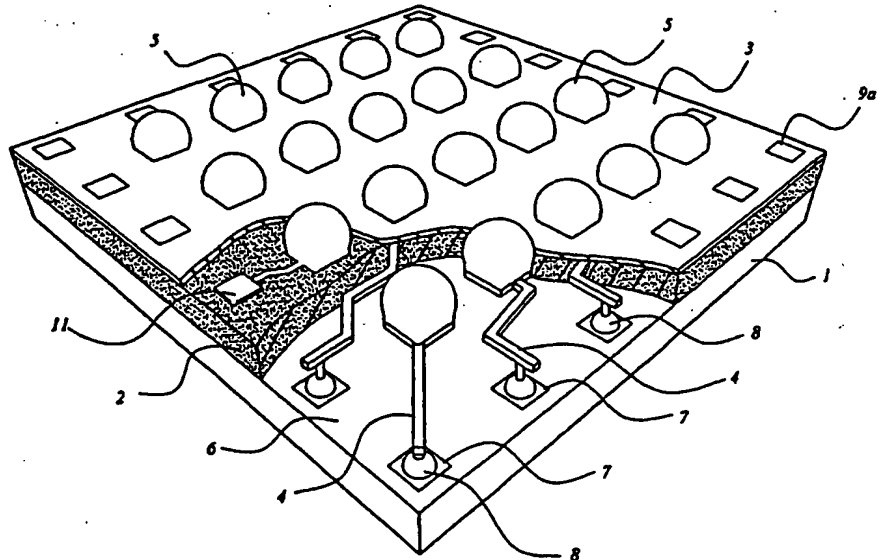
<p>(51) 国際特許分類6 H01L 21/60, 23/12</p>	<p>A1</p>	<p>(11) 国際公開番号 WO99/23696</p> <p>(43) 国際公開日 1999年5月14日(14.05.99)</p>
<p>(21) 国際出願番号 PCT/JP97/03969</p> <p>(22) 国際出願日 1997年10月30日(30.10.97)</p> <p>(71) 出願人 (米国を除くすべての指定国について) 株式会社 日立製作所(HITACHI, LTD.)(JP/JP) 〒101 東京都千代田区神田駿河台四丁目6番地 Tokyo, (JP)</p> <p>(72) 発明者; および (75) 発明者/出願人 (米国についてのみ) 宮本俊夫(MIYAMOTO, Toshio)(JP/JP) 〒187 東京都小平市上水本町五丁目19番1号 誠心寮416号室 Tokyo, (JP) 安生一郎(ANJO, Ichiro)(JP/JP) 〒184 東京都小金井市貫井南町4-5-5 Tokyo, (JP) 有田順一(ARITA, Junichi)(JP/JP) 〒208 東京都武蔵村山市中原2丁目20番6号 Tokyo, (JP) 江口州志(EGUCHI, Shuji)(JP/JP) 〒319-11 茨城県那珂郡東海村白方1711-30 Ibaraki, (JP) 北野 誠(KITANO, Makoto)(JP/JP) 〒300 茨城県土浦市白鳥町1057-8 Ibaraki, (JP) 久保征治(KUBO, Masaharu)(JP/JP) 〒192 東京都八王子市暁町2-29-8 Tokyo, (JP)</p>		<p>宗像健志(MUNAKATA, Takeshi)(JP/JP) 〒178 東京都練馬区南大泉4丁目44番2号 Tokyo, (JP) 福田琢也(FUKUDA, Takuya)(JP/JP) 〒187 東京都小平市回田町219番地 コンフォート神山116号 Tokyo, (JP)</p> <p>(74) 代理人 弁理士 筒井大和(TSUTSUI, Yamato) 〒160 東京都新宿区西新宿7丁目22番45号 N.S. Excel 301 筒井国際特許事務所 Tokyo, (JP)</p> <p>(81) 指定国 AL, AU, BA, BB, BG, BR, CA, CN, CU, CZ, EE, GE, HU, ID, IL, IS, JP, KR, LC, LK, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, SL, TR, TT, UA, US, UZ, VN, YU, ARIPO特許 (GH, KE, LS, MW, SD, SZ, UG, ZW), ユーロパ特許 (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), 欧州特許 (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI特許 (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).</p> <p>添付公開書類 国際調査報告書</p>

(54)Title: SEMICONDUCTOR DEVICE AND METHOD FOR MANUFACTURING THE SAME

(54)発明の名称 半導体装置およびその製造方法

(57) Abstract

In a chip-size package, a low-elasticity elastomer (2) which relieves and absorbs the stresses concentrated upon bump electrodes (5) is formed on the main surface of a semiconductor chip (1), and the wiring (4) connected to bonding pads (7) is led out to the upper surface of the elastomer (2) by way of through holes formed through the elastomer (2) and connected to the bump electrodes (5). The stresses concentrated upon the bump electrodes (5) are absorbed and relieved by not only the elastomer (2), but also the expansion and contraction of the wiring (4) led out to the upper surface of the elastomer (2) by laying the wiring (4) in a curved pattern.



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WO9923696

SEMICONDUCTOR DEVICE AND METHOD FOR MANUFACTURING THE SAME\_\_\_\_  
HITACHI, LTD.Inventor(s): MIYAMOTO, Toshio ; ANJO, Ichiro ; ARITA, Junichi ; EGUCHI, Shuji ; KITANO,  
Makoto ; KUBO, Masaharu ; MUNAKATA, Takeshi ; FUKUDA, Takuya  
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**Abstract:** In a chip-size package, a low-elasticity elastomer (2) which relieves and absorbs the stresses concentrated upon bump electrodes (5) is formed on the main surface of a semiconductor chip (1), and the wiring (4) connected to bonding pads (7) is led out to the upper surface of the elastomer (2) by way of through holes formed through the elastomer (2) and connected to the bump electrodes (5). The stresses concentrated upon the bump electrodes (5) are absorbed and relieved by not only the elastomer (2), but also the expansion and contraction of the wiring (4) led out to the upper surface of the elastomer (2) by laying the wiring (4) in a curved pattern.

Int'l Class: H01L02160; H01L02312

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